Charles Darwin

Charles Darwin was quiet and shy and disliked crowds. He did not want fame, but became one of the most famous scientists of all time. He suggested a theory explaining how living things gradually change, or evolve, over great periods of time. Those animals with features better matched to their surroundings are more likely to survive. These features will then be passed on to the animal’s children. Over very long periods of time, this process gradually means the animals change to suit their environment. New kinds of living things appear as older ones die out. This idea, the theory of evolution by natural selection, caused huge arguments in Darwin’s time. But it is now one of the most important ideas in all of science.

SCHOOL AND STUDIES

Charles Robert Darwin was born in Shrewsbury, Shropshire, on February 12, 1809. His family was wealthy, and his grandfather and father were well-known doctors. His mother died when Charles was eight, so his elder sisters looked after him.

Charles was not especially clever at school, but he was keen on nature and used to collect insects and worms in boxes. In 1825 he went to the University of Edinburgh to study medicine. Unfortunately, he felt sick at the sight of blood, so he moved to Cambridge University, to prepare for joining the Church. What Charles really wanted to do was to be a naturalist and study animals and plants.

OFF AROUND THE WORLD

In 1831, at the age of 22, Darwin joined the ship HMS *Beagle*, as the naturalist on a round-the-world scientific expedition. The expedition set off under the command of Captain Robert Fitzroy to make maps of South America’s coastline. Darwin went ashore at several places to study wildlife and collect specimens of plants, animals, rocks and fossils. He was amazed by an earthquake in Chile that raised the shoreline by over one metre. Darwin began to think about how the Earth’s surface is always changing, an idea he read in *Principles of Geology* (1830-1833) by British scientist Charles Lyell.

IMPORTANT ISLANDS

If the land and sea gradually changed, then Darwin wondered whether the same thing happened to animals and plants? His visit to the Galapágos Islands in the Pacific Ocean was especially important. Darwin saw how animals were very similar from one island to the next, yet slightly different. He imagined how giant tortoises, mockingbirds and finches gradually changed or evolved due to the slightly different food and other living conditions on each island.

BACK AT HOME

The *Beagle* returned after five years and Darwin set to work in London, studying all the specimens that he had collected. His book of the voyage, *Journal of Researches* (1839), sold very well. Darwin read *An Essay on the Principle of Population* (1798) by Thomas Robert Malthus. Malthus showed how humans and other living things produced far more offspring than could survive. Darwin realized that there must be reasons why some offspring lived but others died. Perhaps nature chose, or selected, the survivors? In the 1840s he developed this idea, but kept it private. It would offend many people who believed in the Bible and that animals and plants, created by God, were unchanging.

AN INSTANT BEST-SELLER

In 1839 Charles Darwin married Emma Wedgwood and moved to Down House in Downe, Kent. They had ten children, but three died when they were babies. Darwin began to suffer long illnesses, perhaps due to a disease caught in South America. In 1858 he received a letter from Alfred Russel Wallace, a naturalist travelling in Malaysia. Wallace described ideas on evolution very similar to Darwin’s own. Darwin was persuaded to give a talk on the topic in London, to the Linnean Society, and to finish his own book. This he did in 1859. *On the Origin of Species by Means of Natural Selection* sold out on its first day, and has been a best-seller ever since.

A HUGE ARGUMENT

As Darwin had expected, his book caused a storm of arguments. Many people saw that the idea of evolution could be applied to humans, and made fun of the idea that we are related to apes. Darwin was very upset by this. Many others soon saw the scientific sense in Darwin’s work. In particular, he was supported by Thomas Henry Huxley, who became known as ”Darwin’s Bulldog”.

A QUIET LIFE

In his later life Darwin stayed at home, quietly studying nature. He wrote several more books on breeding new garden plants, animal pets and how earthworms are “nature’s gardeners” and enrich the soil. In 1871 he tackled human evolution from apes, in *The Descent of Man*. Gradually, he was given many honours and awards, including a fellowship of the Royal Society. When he died on April 19, 1882, he was a world-famous scientist and was buried with great ceremony in London’s Westminster Abbey.

| Did you know? |
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| • Charles Darwin left medical school because he was squeamish and did not like dissection or surgery. |
| • In 2000, Charles Darwin's picture replaced that of Charles Dickens on the Bank of England's new £10 notes. |
| • After leaving medical school, Charles Darwin went to Cambridge University to study theology. However, he spent a lot of time collecting beetles instead of studying. |
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